Experiences with Indicator-Based Appraisals: TRW

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Practice Implementation Indicators

- PIIs are the evidence that demonstrates that a CMMI practice is performed – direct, indirect, affirmations

- TRW has used PIIs for many years, as the primary way of demonstrating CMMI compliance
  - Used to prepare for and conduct CMM CBA IPI appraisals
  - A homegrown Excel-based tool is used by all projects and the organization to record how they comply with the CMMI

- PIIS are used continuously throughout the improvement cycle
  - Illustrate the level of detail projects must go to - “evidence for every practice in every process area”
  - Communicates the distribution of organizational and project responsibilities (e.g., policies)
  - Identify gaps between the CMMI and current practices
  - Track improvement progress
  - Determine readiness for appraisal
  - Verify CMMI achievements
A Continuous Appraisal Cycle

Self Assessment
• Completed by Project Manager
• Identifies gaps

Verification (ARC C)
• Reviewed by Process Group for accuracy, potential improvement strategies

Appraisal (SCAMPI)
• Used as questionnaire and reference sheet

Tracking Improvement
• Updated and reported as improvements made

PIID links all 4 steps
Lessons Learned

1. Direct artifacts provide the most accurate assessment of CMMI compliance
   - People often think they’re complying – “It’s somewhere in the project plan.” – but the evidence isn’t conclusive
   - Indirect evidence helps point toward direct evidence

2. Affirmations in interviews are very error-prone
   - Crafting interview questions is time-consuming
   - Interviewees often misunderstand the questions or the terminology
   - Interviews are best used as a sanity check of the direct evidence

3. Efficient appraisals require significant up-front work
   - Projects and the organization must assemble, organize, and review the evidence

4. A proper evidence trail requires up-front planning and education
   - How will we document each practice? How much documentation is adequate?

5. The focus on evidence can diminish sight of the improvement itself
   - More time creating documents, than thinking about the decisions reflected in the documents – “just creating paperwork for the appraisers”